

Bates (W=H.)

A NEW OPERATION

FOR THE

ALLEVIATION OF PERSISTENT DEAFNESS

BY

WILLIAM H. BATES, M.D.

NEW YORK



Reprinted from THE MEDICAL RECORD, January 23, 1886

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A NEW OPERATION FOR THE ALLEVIATION OF PERSISTENT DEAFNESS.

MANY cases of deafness are not benefited by thorough catarrhal treatment, inflation of the middle ear, the use of Siegle's otoscope, an artificial opening in the drum-membrane, division of the tensor tympani, etc. I desire to call the attention of the profession to an operation which has benefited a number of these obstinate cases.

The operation consisted in puncturing or incising the drum-membrane in from five to ten different places. Simple punctures were made, or the drum-membrane was slit in various directions. The operation was repeated as soon as the openings in the drum-membrane had healed. The size and freedom of the incisions must be determined after the first operation for each case.

For the operation I employed a Graefe cataract-knife with a long shank. It is important that the knife be *sharp*, and to make this certain I often used a freshly sharpened knife for each puncture. Pain was avoided by this precaution. A dull knife, or the paracentesis instruments sold in the shops, caused more pain than the patients could bear.

Cocaine was not necessary when the knife-blade was in proper condition, and this remedy would not prevent pain when the knife was dull.

The result of this operation is to leave a number of cicatrices in the drum-membrane; the subsequent contraction of these producing a tension by which the membrane is drawn out. The membrane frees itself from adhesions in this manner, and in many cases loosens the

anchylosed ossicles. The various benefits of paracentesis, as formerly employed, are not only obtained but much increased. It is not an improvement the result of a perforation of the drum-membrane alone, which, as is well known, is often doubtful and transitory, but the subsequent healing of the openings is part of an improving process. The operation, suggested by that of paracentesis, differs from it in the simultaneous number and extent of the incisions, as well as in the purpose for which it is resorted to, and in the immediate and subsequent results.

CASE I.—J. M.—, aged fourteen, resident of Boston, presented himself at my office, July 8, 1885. Deaf in right ear since childhood. Has had measles, scarlet fever, and cerebro-spinal meningitis. Has been seen and treated by specialists in Boston. Examination: Drum-membrane depressed, thickened, congested, adherent to the promontory from chronic catarrh of the middle ear, Eustachian tubes congested. Hearing distance for snapping of finger-nails, two inches. Hears no conversation, whisper, or watch. Inflated readily. Hearing distance not improved by inflation.

July 18th.—Thorough treatment of the catarrh with inflation of the middle ear had improved the hearing distance at the outset, but this limited improvement was again lost. In view of the etiology of the ear trouble, and still further from the unsatisfactory result of the routine treatment, and the apparent hopelessness of these cases, even in hands more skilled than mine, I was much disengaged. I then determined to make a paracentesis, but one more general than usual.

July 19th.—I made three incisions in the drum-membrane.

July 20th.—My patient heard better; and on examining the drum-membrane I found my punctures healed, and, while the membrane seemed less congested, it also appeared a little less depressed. With nothing to lose, and perhaps something to gain, I now made bold to make six free incisions into the membrane, hoping for a

possible continuation of the improvement. These incisions healed over as rapidly as before ; and, on the succeeding days, each day found the hearing improved, with an apparent diminishing depression in the membrane. It now occurred to me that the wounds in healing seemed to draw upon the membrane, and that the cicatrices were acting as elevators.

On July 25th, the membrane having healed, I made a single, but very large incision into the drum, and then proposed to await developments. Daily the hearing improved, until, on August 10th, I found the drum-membrane was healed. Examination revealed that the hearing distance for the watch in the right ear had risen to 18 inches (the same for the left ear), which under favorable surroundings was ten feet.

The patient was seen and kindly examined by Dr. Pomeroy, who recognized the hearing distance for watch at 18 inches. The patient remained under observation until August 16th ; improvement had remained and increased. He now returned to his home out of town.

January 13, 1886.—A written communication of this date informed me that the improvement has persisted.

CASE II.—N. L. J.—, male, aged thirty, merchant, native of United States, came under observation at the time that I had met my first encouragement in Case I.

July 21st.—Began treatment. Complained of noises in both ears, and of constant vertigo. Examination revealed no hearing in left ear. In right ear heard snapping of finger-nails at 2 inches. Drum-membranes depressed, thickened, congested, and adherent to the promontory. Made four free incisions in both drums.

Treatment repeated six times, and on August 9th he passed from observation. On this date the tinnitus was much improved, the vertigo had disappeared. Hearing distance in both ears for snapping of finger-nails, 6 inches.

Two months later the improvement was reported as continuing.

CASE III.—C. H.—, German, aged thirty-four ; very

nervous man. Complained of noises in both ears. Examined and found to be suffering from chronic catarrh of the middle ear.

October 15th.—Heard watch in right ear, two and one-half inches; nine inches in left ear.

October 16th.—One incision in right drum-membrane.

October 17th.—One incision in right drum-membrane.

October 21st.—No better. Incisions were made in both drum-membranes.

October 29th.—Noise in left ear had stopped entirely. Incision in right drum-membrane.

December 4th.—Noises in right ear a little better. Five incisions were made in the right drum-membrane.

January 11th, 1886.—Incision made in the right drum-membrane.

January 14th.—Three incisions were made in the right drum-membrane.

January 15th.—The noises in the left ear have not returned. The noises in the right ear are very much better, and have stopped occasionally. The hearing is better for conversation. Patient appears less nervous.

The succeeding case presents some features of unusual interest. It was in the person of a *deaf-mute*, who seemed intelligent.

CASE IV.—B. R.—, female, aged seventeen; had scarlatina and measles in early infancy, was never able to speak, but appeared observing and intelligent. Is a fairly developed girl. Has been treated three months at one of our public institutions by a most competent specialist without result. Examination revealed chronic catarrh of the middle ear. The drum-membrane was depressed, thickened, congested, adherent to the promontory.

October 3, 1885.—Began treatment. Hearing distance for the snapping of finger-nails four inches for the right ear, one inch for the left ear. Conversation not heard.

October 4th.—Five incisions were made in both drums.

October 6th.—Both drum-membranes healed. Hearing distance improved.

October 7th.—Four incisions in the right drum-membrane, two incisions in the left.

October 8th.—Hears better.

October 9th.—Three incisions in the right drum-membrane.

October 12th.—One incision in the right drum-membrane. Left drum-membrane not healed.

October 14th.—One incision in the right drum-membrane.

October 15th.—Left drum-membrane healed; incised.

October 17th.—Two incisions in the right drum-membrane.

October 19th.—One incision in the right drum-membrane.

October 20th.—Left drum-membrane incised. Hearing lowered immediately after the operation.

October 22d.—Hears snapping of finger-nails two inches with both ears.

October 29th.—Hears snapping of finger-nails six inches with both ears. Five incisions were made in the left drum-membrane; hearing reduced to two inches.

November 1st.—Right drum-membrane healed. Left drum-membrane open. Hears nails with right ear twenty inches; five inches with left ear. Inflation did not improve.

November 26th.—Hears watch half an inch with both ears.

December 7th.—Three incisions were made in the left drum-membrane.

January 6, 1886.—Three incisions made in the right drum-membrane.

January 11th.—Five incisions were made in the left drum-membrane.

January 13th.—Hears watch at least six inches with both ears. Hears conversation and whisper. Since hearing was restored it became necessary to teach pa-

tient language, and she is now, under careful tutelage of her guardian, learning the rudiments of speech, her own name, the names of common objects, etc., etc.

With as yet a limited experience and the comparative brief time which has elapsed since I have first performed this operation, its full scope and range has not yet been determined.

That I have benefited some apparently incurable cases, I can, with becoming modesty, honestly contend. In the light of the classical treatment of chronic cases and its frequent failure, this innovation, which has given results as unexpected and satisfactory to me as to the patients, may be fairly presented for future endorsement. To Dr. O. D. Pomeroy I extend most sincere thanks for kind corroboration as to the hearing of some of the above cases. In conclusion, I beg to state that all of the cases have been seen and examined by observers besides myself.

49 WEST FIFTY-SEVENTH STREET,
January 23, 1886.

